

REMARKS/ARGUMENTS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. Claims 1 and 3-17 are pending.

Claim 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Okada (3,758,133) in view of Braunschadel (6,056,318). This rejection is respectfully traversed.

To establish a claim of obviousness, there must be some suggestion or motivation to a person having ordinary skill in the art to modify the reference or to combine reference teachings (MPEP §706.02(j)). Further, if the proposed combination "would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious." (MPEP §2143.01).

Neither Okada nor Braunschadel disclose the combination of an extensible membrane bulging outwards like a balloon during inflation and a device for destroying the membrane. There is no suggestion or motivation to combine the teachings of Okada and Braunschadel.

Such a modification of Okada to have the membrane bulge forward toward an exterior like a balloon before reaching the device would change the principle operation of Okada. Okada discusses the principle operation of the invention at column 2, line 17. In particular, Okada states:

"This invention obviates these defects in such a way that when the driver is flung against the air bag upon vehicle collision, the bag is pushed and is deformed forwards, and thereby the normally closed escape device is immediately opened for discharging the

internal air from the bag to decrease the internal pressure."

Any bulging of the film 8 of Okada forward toward an exterior like a balloon before reaching the device would change the principle operation of Okada, since the normally closed escape valve 8 of Okada would not immediately open to discharge the internal air from the bag, when the driver is flung against the air bag upon vehicle collision.

In this respect too, a person skilled in the art would choose an inelastic material rather than an extensible material as claimed in claim 1 to ensure a reliable cutting of the membrane to accomplish the immediate opening of the valve to discharge the internal air from the bag.

Further, the Okada reference teaches away from modifying its design to use the fabric layer 4 of Braunschadel. As disclose at col. 2, lines 35-41 of Braunschadel, the fabric layer 4 is gas permeable and thus allows air leakage. By contrast, the design of Okada does not allow air leakage until the valve 8 immediately opens to discharge the internal air as stated above. Okada specifically teaches away from allowing air leakage before the valve is opened. In particular, Okada states the following at Column 2, line 1.

"For lowering the repelling power of the air bag acting on the driver, it has been hitherto proposed that the air bag be provided with a small hole for air leakage. However, with this arrangement not only is there waste in that the internal air leaks in the course of expansion of the air but also there is a great time lag between the collision of the car and the expansion of the bag."

Thus, Okada teaches away from modifying its design using the gas permeable fabric 4 of Braunschadel, since such a modification would produce air leakage.

Therefore, in view of the above-mentioned reasons, claim 1 is allowable. Claims 3-8 and 13, which depend from claim 1, are allowable as depending from an allowable claim and also for their specific feature recited therein.

Claims 9-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by Okada. This rejection is respectfully traversed.

Okada does not disclose or suggest a membrane made of an extensible material which covers an outflow opening of the gas bag as claimed in claim 9. By contrast, Okada only discloses that the part of the front surface portion of the air bag 3 is formed as a film 8 of reduced thickness as shown in Fig. 5 to serve as a valve. Okada fails to disclose that the film is made of extensible material. In fact, a person skilled in the art would rather choose an inelastic material to ensure a reliable cutting of the film 8 to accomplish the immediate opening of the valve to discharge the internal air from the bag.

Further, Okada does not disclose or suggest a membrane that expands to meet a device serving for destroying the membrane. By contrast, the gas bag and film 8 move forward to be cut by the cutter 9. Okada does not disclose that the film 8 expands when the gas bag deforms and moves forward.

Moreover, if Okada were modified with an elastic membrane, such expansion of the membrane would change the principle operation of Okada, because the normally closed

escape valve 8 of Okada would not immediately open to discharge the internal air from the bag, when the driver is flung against the air bag upon vehicle collision.

Therefore, claim 9 is allowable. Claims 10-12, which depend from claim 9, are allowable as depending from an allowable claim and also for their specific feature recited therein.

New claim 14 recites a gas bag protection device comprising a gas bag which has an outer wall defining an inflatable volume. The outer wall is made of a first material and has at least one outflow opening. The gas bag protection device also comprises a membrane made of an extensible, gas impermeable second material which is fastened to the outer wall and covers the outflow opening in a not fully inflated state of the gas bag. The gas bag protection device further comprises a device provided outside the gas bag and serving for destroying the membrane. The gas bag and the device are arranged spaced apart from each other that the membrane meets the device only when a predetermined internal pressure of the gas bag has been reached. The membrane is arranged inside the gas bag volume and bulges outwards through the outlet opening like a balloon before reaching the device.

Neither Okada nor Braunschadel nor any of the other prior art disclose or suggest all of the features claimed in claim 14. Therefore, claim 14 is allowable.

New claim 15, which depends from claim 14, should be allowable for the same reasons as claim 14 and also for the additional feature that the gas bag remains rearward from the device when the membrane is destroyed by the device. Neither

Okada nor Braunschadel nor any of the other prior art disclose or suggest this feature. Therefore, claim 15 is allowable.

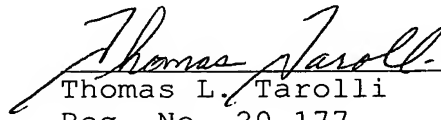
New claim 16, which depends from claim 14, should be allowable for the same reasons as claim 14 and also for the additional feature that the membrane defines a recess that extends inwardly of the gas bag from the outlet opening prior to inflation of the gas bag. Neither Okada nor Braunschadel nor any of the other prior art disclose or suggest this feature. Therefore, claim 16 is allowable.

New claim 17 recites a gas bag protection device comprising a gas bag which has an outer wall made of a first material. The outer wall has at least one outflow opening. The gas bag protection device also comprises a membrane made of an extensible, second material which is fastened to the outer wall and covers the outflow opening in a not fully inflated state of the gas bag. The gas bag protection device further comprises a device provided outside the gas bag and serving for destroying the membrane. The membrane bulges forward toward an exterior like a balloon before reaching the device to increase the volume of the gas bag and reduce the pressure in the gas bag. The gas bag and the device are spaced apart from each other to cause the membrane to meet the device and be destroyed only when a predetermined internal pressure of the gas bag has been reached. Neither Okada nor Braunschadel nor any of the other prior art disclose or suggest all of the features claimed in claim 17. Therefore, claim 17 is allowable.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

  
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